

Commonwealth of Kentucky

Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V DRAFT PERMIT NO. V-05-027

CRANE COMPOSITES INC. (FORMERLY LASCO COMPOSITES LP)

FLORENCE, KY.

MARCH 7, 2007

HOSSEIN RAKHSHAN, REVIEWER

SOURCE I.D. #: 021-015-00025

SOURCE A.I. #: 204

ACTIVITY #: APE20040001

SOURCE DESCRIPTION:

Lasco Composites LP has submitted form DEP7007AI to accomplish the administrative change of the name of the company. The company name has been changed to Crane Composites Inc. On October 6, 2006, the division was in receipt of a revised Title V permit application from Crane Composites Inc. The revision includes information from the compliance testing conducted on April 19, 2006; MACT requirements; and updated equipment information. Crane Composites Inc. produces several different types of fiberglass panel products on three different automated production lines. The panel products include both flat sheets and corrugated sheets. The finished sheets are shipped in palletized coils or pre-cut sheet bundles.

The production lines are called "Line Two", "Line Three", and "Line Four". Lines two and three are known as the narrow-lines and produce panels up to about four feet in width. Line four is known as the wide-line and produces panels up to about nine feet in width. In the Title V permit, the abbreviations L02, L03, and L04 are used to designate at which production line a piece of equipment is located.

All three production lines use the same basic process steps to manufacture fiberglass panels. The following eleven steps are required to produce the most complicated panel, a corrugated gelcoated panel. Less complicated panels may omit one or more of these steps:

- 1) **Preparation of Resin** - the resin mixture is blended in a special mix tank in a separate area of the plant building. The resin mixture is brought to the production line by forklift.
- 2) **Deployment of the Lower Polyester Film** - a large motorized roller assembly mounted at the beginning of the line unrolls the lower polyester film and pulls it through the production line.
- 3) **Application of Resin to Lower Film** - the resin mixture is pumped from the mix tank to the production line through a static mixing section where the final catalyst is blended into the resin. The catalyzed resin mixture is poured onto the center of the lower film as the film is pulled through the line. A "doctor blade" spreads the resin mixture out to the proper thickness.
- 4) **Application of Fiberglass Strands to Lower Film** - a long rotating knife assembly draws together numerous bundles of glass roving from bundles stored on special overhead shelves and cuts the roving into short glass fiber strands. The strands are allowed to drop into the wet resin film moving beneath the knife assembly.

- 5) **Wetout of Fiberglass Strands** - a pair of wetout rollers and a "quiet" section of line help to wet the fiberglass strands with the resin mixture. The resin is also heated to initiate the curing process.
- 6) **Application of Gelcoat to Upper Polyester Film** - is only required for a gelcoated panel. A roller assembly unrolls the upper polyester film above the line. The gelcoated mixture is catalyzed, poured out, and spread onto this film in the same fashion as the resin on the lower film. The catalyzed gelcoat is heated in a small oven and allowed to cure to the "tacky" stage. The tacky gelcoat-covered upper film is then conducted down to the resin-covered lower film.
- 7) **Combination of Upper and Lower Films** - the lower resin-covered film and upper gelcoat-covered films are pressed together in a "pinch roller".
- 8) **Corrugation-Forming in the Gel Oven** - the still uncured panel is pulled through a long direct-fired gas oven. A series of special hardwood forms called shoes are used to gradually form the proper corrugations in the panel. The heat of the oven starts to cure the resin which hardens the panel.
- 9) **Final Curing in the Cure Oven** - the corrugated panel is pulled through another oven at a higher temperature. This completes the curing process.
- 10) **Cutting the Panel to Size** - after leaving the cure oven, the panel sides are trimmed to size, and the corrugated panel is cut to length by a flying crosscut saw.
- 11) **Preparation of Finished Panels for Shipment** - the corrugated panels are stacked together onto a wooden pallet and either transported to a waiting truck or to the warehouse area.

Crane Composites Inc. submitted a Title V application to the Division on December 14, 1999. They submitted a revised Title V application on June 15, 2004 and on October 6, 2006. Crane Composites is an existing major source for volatile organic compounds. A regenerative thermal oxidizer is currently in operation to control the source-wide emissions of VOCs. Nonattainment new source review (401 KAR 51:052) does not apply because the source was constructed prior to the classification date of that regulation and has had no major modifications since then. There is a MACT standard - 40 CFR 63 Subpart WWWW, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production - that does apply to Crane Composites. This MACT will require Crane Composites to reduce HAP emissions by 95%.

Major sources of VOC in an ozone non-attainment area are required to install and use reasonably available control technology (RACT). Crane Composites uses a thermal oxidizer to control VOC emissions with an efficiency of 95%. The Division believes this qualifies as RACT.

INDIVIDUAL UNIT, OPERATION OR ACTIVITY EMISSION AND OPERATING CAPS:

EP1:

M01-Mixing Room

L02-Narrow Line 2

L03-Narrow Line 3

LO4-Wide Line 4

L02-Oven

L03-Oven

L04-Oven

Applicable Regulations: **40 CFR Part 63, Subpart WWWW**, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, applicable to existing plastic composites production facilities located at a major source of HAP emissions for which construction commenced before August 2, 2001. For an Existing Major Source the Compliance Date is April 21, 2006.

Applicable Regulations **401 KAR 61:060**, Existing sources using organic solvents

Specific Operating Limitations: None

Specific Emission Limitations:

VOC emissions from the above points shall be reduced 95% by weight per **40 CFR Part 63, Subpart WWWW**. Therefore, 85% weight reduction for VOC emissions as required in 401 KAR 61:060 Section 3(1) does not apply because Subpart WWWW sets more stringent emissions limit. Compliance is assumed when the thermal oxidizer is in operation.

Specific Monitoring Requirements:

The permittee shall monitor the following [401 KAR 61:060, Section 3(4)]:

- a) The RTO temperature continuously while it is in operation to ensure a minimum temperature of 1300°F is maintained.
- b) Daily throughput rates for the above emission points.
- c) Hours of operation.

EP2:

Polymerization Room:

Applicable Regulations: **40 CFR Part 63, Subpart WWWW**, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, applicable to existing plastic composites production facilities located at a major source of HAP emissions for which construction commenced before August 2, 2001. For an Existing Major Source the Compliance Date is April 21, 2006.

Non-Applicable Regulations: **401 KAR 61:060**, per section one 2(a).

Specific Operating Limitations:

Keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.

Specific Emission Limitations: None

Specific Monitoring Requirements:

The permittee shall monitor the daily maximum weight and contents of waste liquid in the drums [401 KAR 61:060, Section 3(4)].

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.